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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,361	07/29/2003	Henry A. Hill	09712-331001 /Z-430	8937
26161	7590	08/01/2006	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			ANDERSON, DENISE BROWN	
			ART UNIT	PAPER NUMBER
			2877	
DATE MAILED: 08/01/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,361

Applicant(s)

HILL, HENRY A.

Examiner

Denise B. Anderson

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32 is/are allowed.
- 6) ☒ Claim(s) 1-25 and 31 is/are rejected.
- 7) ☒ Claim(s) 26-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-15, 23-25 and 31 are rejected under 35 U.S.C. 101 because the claimed invention does not produce a useful, concrete and tangible result.

As to claim 1, applicant claims a method that involves measuring a location, calculating a correction term, and determining a location. None of these steps involve using the location information or correction term to further produce a tangible result, such as more precisely altering the location of the stage for improving the lithography system based on the measured/calculated results.

As to claims 2-15, applicant further describes claim 1 without claiming how the information is used to produce a tangible result.

As to claims 23-25 and 31, applicant describes monitoring the degree of freedom and correcting the measurement of the degree of freedom without describing how the corrected measurement will be used to produce a tangible result, such as using the corrected measurement to enhance the fabrication process.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2877

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Kamiya.

As to claim 15, Kamiya discloses interferometrically monitoring two locations of a mirror surface (the two locations are the beginning and end points of a distance d , described in column 2, lines 5-13) relative to respective parallel axes (see LB1, LB2 or LB3, LB4 in figure 2) while translating the mirror surface along a path substantially orthogonal to the parallel axes (column 2, lines 5-13 and lines 22-36); and determining contributions from different spatial frequencies to surface imperfections of the mirror (column 8, lines 4-12 and column 11, lines 5-13).

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states, "Whoever invents or discovers any new and useful process ... may obtain a patent therefor..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-22 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-22 of copending Application No. 10/980,706. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented. The claims are identical in wording; claiming the same features word for word,

claim for claim (i.e., claim 1 in the examined application is identical to claim 1 in the conflicting application, etc.)

Allowable Subject Matter

Claims 26-30 and 32 are allowable.

Claims 26-28 are objected to as being dependent upon rejected base claims (claims 23-25, respectively), but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and if the 35 USC 101 rejections to claim 23-25 were overcome.

Claims 29 and 30 are objected to as being dependent upon rejected base claims (claims 20 and 21, respectively), but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and if the Double Patenting rejections to claims 20 and 21 were overcome.

Claim 32 is allowable because the prior art of record fails to disclose or render obvious an apparatus with means for determining position information based on surface imperfections caused by spatial frequencies with differently weighted contributions in combination with the rest of the limitations of the claim.

Response to Arguments

Applicant's arguments filed 4/17/06 have been fully considered but they are not persuasive with respect to claim 15. With respect to applicant's argument that Kamiya does not "determine" the contributions: it would be impossible for Kamiya to make the error corrections without knowing the spatial frequency contributions, therefore, although the word "determine" is not used in Kamiya, it is inherent in the description in

Art Unit: 2877

column 11, lines 5-12 that errors exist and can be corrected, signifying that the errors have been determined in some way.


Applicant's arguments see page 2 of applicants remarks, filed 4/17/06, with respect to claim 16 have been fully considered and are persuasive. The rejection of claim 16 has been withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise B. Anderson whose telephone number is 571-272-8324. The examiner can normally be reached on Mon-Fri (9:30 AM - 6 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Denise B. Anderson, PhD
Assistant Patent Examiner


Gregory J. Toatley, Jr.
Supervisory Patent Examiner

HWA (ANDREW) LEE
PRIMARY EXAMINER

Application/Control Number: 10/630,361

Page 6

Art Unit: 2877

Art Unit 2877

Art Unit 2877

DBA

Date Signed: 7/19/06